

Application No.: 09/632,933  
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**Amendments to the Claims:**

Please replace all prior versions, and listings of claims in the application with the following listing of claims.

**Listing of claims**

**Claim 1 (currently amended):** A method of generating an authentication ciphering offset (ACO) in a communication device, ~~wherein the ACO is a number from which a ciphering key for the communication device is derived, and which is never communicated to any other communication device~~, the method comprising:

generating the ACO as a function of [[one]] two or more parameters, wherein at least one of the [[one]] two or more parameters is derived from earlier-computed values of the ACO,

wherein the ACO is a number from which a ciphering key for the communication device is derived, and which is never communicated to any other communication device; and

wherein the step of generating the ACO as a function of two or more parameters comprises generating a  $k$ th value,  $X_k$  from one or more of the parameters, and applying a commutative binary operation between  $X_k$  and a previous value,  $ACO_{k-1}$ .

**Claim 2 (canceled)**

**Claim 3 (currently amended):** The method of claim 1, wherein the step of generating the ACO as a function of [[one]] two or more parameters comprises:

generating a  $k$ th value of ACO as a running sum in accordance with:

$$ACO_k = X_k \oplus ACO_{k-1} = \sum_{i=1}^k X_i ,$$

wherein  $X_i$  is generated as a function of the [[one]] two or more parameters excluding the at least one of the [[one]] two or more parameters that is derived from earlier-computed values of the ACO.

**Claim 4 (original):** The method of claim 3, wherein the sum is a bitwise modulo-2 sum.

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**Claim 5 (original):** The method of claim 4, wherein the bitwise modulo-2 sum is performed by means of a bitwise exclusive-OR (XOR) operation.

**Claim 6 (currently amended):** An apparatus for generating an authentication ciphering offset (ACO) in a communication device, ~~wherein the ACO is a number from which a ciphering key for the communication device is derived, and which is never communicated to any other communication device,~~ the apparatus comprising:

logic configured to generate the ACO as a function of [[one]] two or more parameters, wherein at least one of the [[one]] two or more parameters is derived from earlier-computed values of the ACO,

wherein the ACO is a number from which a ciphering key for the communication device is derived, and which is never communicated to any other communication device: and  
wherein the logic configured to generate the ACO as a function of two or more parameters comprises logic configured to generate a kth value,  $X_k$  from one or more of the parameters, and to apply a commutative binary operation between  $X_k$  and a previous value,  $ACO_{k-1}$ .

**Claim 7 (canceled)**

**Claim 8 (currently amended):** The apparatus of claim 6, wherein the logic configured to generate the ACO as a function of [[one]] two or more parameters comprises:

logic configured to generate a kth value of ACO as a running sum in accordance with:

$$ACO_k = X_k \oplus ACO_{k-1} = \sum_{i=1}^k X_i ,$$

wherein  $X_i$  is generated as a function of the [[one]] two or more parameters excluding the at least one of the [[one]] two or more parameters that is derived from earlier-computed values of the ACO.

**Claim 9 (original):** The apparatus of claim 8, wherein the logic configured to generate a kth value of ACO comprises logic configured to perform a bitwise modulo-2 sum.

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**Claim 10 (original): The apparatus of claim 9, wherein the logic configured to perform a bitwise modulo-2 sum comprises logic configured to performed a bitwise exclusive-OR (XOR) operation.**

**Claim 11 (original): The apparatus of claim 6, wherein the communication device includes a real-time device.**

**Claim 12 (original): The apparatus of claim 6, wherein the communication device includes a non-real-time device.**